

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PALLBA266	FOR FURTHER ACTION		see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/EP2005/001056	International filing date (day/month/year) 01/02/2005	(Earliest) Priority Date (day/month/year) 02/02/2004	
Applicant L&L PRODUCTS, INC.			

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. **Certain claims were found unsearchable** (See Box II).

3. **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 8

as suggested by the applicant.

as selected by this Authority, because the applicant failed to suggest a figure.

as selected by this Authority, because this figure better characterizes the invention.

- b. none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International Application No

T/EP2005/001056

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B32B5/18 E04C2/00 A63C5/00 B60R21/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B32B E04C A63C B60R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 2 356 509 A (PHILIPS GLOEILAMPENFABRIEKEN NV) 27 January 1978 (1978-01-27) Sandwich with foamed epoxy resin core and fibrous skin layers. page 1, line 23 – page 2, line 33 -----	1-3,5-21
X	US 3 941 725 A (SCHMITTER ET AL) 2 March 1976 (1976-03-02) Sandwich with foamed epoxy resin core and metal skin layers. example 26 -----	1-3,5-21
X	US 4 065 150 A (VAN AUKEN ET AL) 27 December 1977 (1977-12-27) Fibres/epoxy foam/fibres laminate for ski. column 2, line 33 – column 3, line 2 column 3, line 25 – line 40 ----- -/-	4-21

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

5 August 2005

Date of mailing of the international search report

23 SEP 2005

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Stinchcombe, J

INTERNATIONAL SEARCH REPORT

International Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 030 488 A (SOBOLEV ET AL) 9 July 1991 (1991-07-09) Metal/epoxy foam/metal. example II -----	1-21
X	EP 0 047 229 A (CIBA-GEIGY AG) 10 March 1982 (1982-03-10) Fibre reinforced resin/epoxy foam/fibre reinforced resin. page 3, paragraph 2 – paragraph 4 example 4 -----	4-21
A	US 5 849 407 A (SEIBERT ET AL) 15 December 1998 (1998-12-15) No epoxy foam. Al sheet thickness 0.5 mm. column 2, line 58 – line 65 claims 1,4 -----	1-21

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2005/001056

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
1-21 (in full)

4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-3 (in full), 5-21(in part)

Composite comprising sandwich structure comprising at least two surface layers attached to a central layer of rigid epoxy foam with thickness at least 1.5 times the combined thickness of the surface layers and the foam of density 0.2-1.5 g/cm³. Use thereof in construction, transport or sporting goods.

2. claims: 4 (in full), 5-21 (in part)

Composite comprising at least two surface layers of thickness 0.2-10 mm and a core layer of rigid epoxy foam with thickness 2-200 mm. Use thereof in construction, transport or sporting goods.

3. claims: 22 (in full), 24-31 (in part)

Process in accordance with claim 22.

4. claims: 23 (in full), 24-31 (in part)

Process in accordance with claim 23.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

CT/EP2005/001056

Patent document cited in search report	Publication date		Patent family member(s)	Publication date
FR 2356509	A 27-01-1978	NL DE FR JP	7607048 A 2726912 A1 2356509 A1 53001863 A	30-12-1977 29-12-1977 27-01-1978 10-01-1978
US 3941725	A 02-03-1976	CH AT AT BE CA DE ES FR GB IT JP JP JP NL SE SE ZA	583264 A5 333045 B 742974 A 819922 A1 1030300 A1 2443430 A1 430015 A1 2243975 A1 1481232 A 1021382 B 1135441 C 50076175 A 57026530 B 7412202 A 398509 B 7410410 A 7405854 A	31-12-1976 25-10-1976 15-02-1976 13-03-1975 25-04-1978 27-03-1975 16-09-1976 11-04-1975 27-07-1977 30-01-1978 14-02-1983 21-06-1975 04-06-1982 18-03-1975 27-12-1977 17-03-1975 29-10-1975
US 4065150	A 27-12-1977	BE DE DK FI FR GB IT JP NL NO SE	850713 A1 2647586 A1 6577 A 763173 A 2338721 A1 1561435 A 1064045 B 52092633 A 7612670 A 763890 A 7612747 A	25-07-1977 28-07-1977 27-07-1977 27-07-1977 19-08-1977 20-02-1980 18-02-1985 04-08-1977 28-07-1977 27-07-1977 27-07-1977
US 5030488	A 09-07-1991	CA EP WO US	2003638 A1 0445213 A1 9005633 A1 5219629 A	23-05-1990 11-09-1991 31-05-1990 15-06-1993
EP 0047229	A 10-03-1982	CA DE EP ES JP	1184106 A1 3166337 D1 0047229 A2 8206278 A1 57075848 A	19-03-1985 31-10-1984 10-03-1982 16-11-1982 12-05-1982
US 5849407	A 15-12-1998	DE AU AU CA EP JP NZ	19547672 A1 713135 B2 7642196 A 2193455 A1 0780224 A2 9174784 A 299973 A	26-06-1997 25-11-1999 26-06-1997 21-06-1997 25-06-1997 08-07-1997 24-09-1998